

The background of the slide is a light beige, textured surface resembling aged paper. It is decorated with numerous black ink splatters and dots of varying sizes, primarily concentrated on the left side and scattered across the upper half of the image. The word "Taxonomy" is written in a large, black, serif font, centered horizontally in the lower half of the slide.

Taxonomy

The science of classification

Classification

The process of putting things into similar groups

Taxonomy

The science of classifying organisms

History of classification

Aristotle:

- 4000 BC
- Based on 2 groups: animal and plant

1500 – 1700:

- Complicated and complex
- Based on common names
- Based on long scientific definitions

Carolus Linnaeus

- Established present system for identifying and naming
- Based them upon structural similarities
- Binomial nomenclature: 2 name naming system
- Taxa (pl.) or taxon: system of groups
- A taxon is a category where related organisms are placed together

Levels of classification

- Domain
- Kingdom
- Phylum
- Class
- Order
- Family
- Genus (first part of scientific name)
- Species (second part of scientific name)

Example of levels

	Man	Box Elder	Australian dingo	House dog
Domain	Eukarya	Eukarya	Eukarya	Eukarya
Kingdom	Animalia	Plantae	Animalia	Animalia
Phylum	Chordata	Anthophyta	Chordata	Chordata
Class	Mammalia	Dicotyledonae	Mammalia	Mammalia
Order	Primata	Sapindales	Carnivora	Carnivora
Family	Hominidae	Sapindales	Canidae	Canidae
Genus	<i>Homo</i>	<i>Acer</i>	<i>Canis</i>	<i>Canis</i>
Species	<i>sapiens</i>	<i>nugundo</i>	<i>lupus dingo</i> (v.)	<i>familiaris</i>

Evidence used to classify into groups

- Embryology
- DNA evidence
- Biochemistry
- Physiology
- Evolution
- Behavior

Phylogeny

- Study of evolutionary relationships
- Phylogenetic tree
- Cladograms

Biosystematics

- Study of the evolution of one species into two
- Reproductive compatibility
- Gene flow

Domains

- Eukarya
- Prokarya
- Archaeobacteria

Kingdom Monera

- Prokaryotes
- Autotrophs or heterotrophs
- Anaerobic or Aerobic
- Aquatic, terrestrial, and in the air
- Mostly asexual
- Mostly non-motile

Kingdom Protista

- Eukaryotic
- Heterotrophs or Autotrophs
- Unicellular
- Mostly aquatic
- Mostly asexual
- Motile or non-motile
- Protozoa, slime molds, algae

Kingdom Fungi

- Eukaryotic
- Heterotrophic
- Unicellular and multi-cellular
- Mostly terrestrial
- Asexual and sexual
- Non-motile
- Mushrooms, yeasts, molds, rusts, puffballs

Kingdom Plantae

- Eukaryote
- Multi-cellular
- Autotrophic
- Mostly terrestrial
- Asexual or Sexual
- Non-motile
- Mosses, ferns, conifer, flowering plants

Kingdom Animalia

- Eukaryote
- Multi-cellular
- Heterotrophic
- Terrestrial and Aquatic
- Sexual mostly
- Mostly motile
- Sponges, worms, birds, mammals...